

Title (en)  
SPECTRUM SHARING BETWEEN AN AIRCRAFT-BASED AIR-TO-GROUND COMMUNICATION SYSTEM AND EXISTING GEOSTATIONARY SATELLITE SERVICES

Title (de)  
GEMEINSAME SPEKTRUMSNUTZUNG ZWISCHEN EINEM FLUGZEUGBASIERTEN LUFT-BODEN-KOMMUNIKATIONSSYSTEM UND BESTEHENDEN GEOSTATIONÄREN SATELLITENDIENSTEN

Title (fr)  
PARTAGE DE SPECTRE ENTRE UN SYSTÈME DE COMMUNICATION AIR-SOL BASÉ SUR AÉRONEF ET DES SERVICES SATELLITES GÉOSTATIONNAIRES EXISTANTS

Publication  
**EP 3629494 B1 20240410 (EN)**

Application  
**EP 19210063 A 20120626**

Priority  
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• EP 12730774 A 20120626  
• US 2012044266 W 20120626

Abstract (en)  
[origin: US2011263199A1] The present Spectrum Sharing System implements spectrum reuse between aircraft-based Air-To-Ground (ATG) communication systems and Geostationary Satellite Service systems. This is accomplished by managing the radio frequency transmissions in the volume of space in which the aircraft operates, with interference between the Spectrum Sharing System and the Geostationary Satellite Service system being reduced by implementing reversed uplink and downlink radio frequency paths in the common spectrum. The Spectrum Sharing System also avoids interfering with Geostationary Satellite Services' earth stations which are pointed towards the satellites' orbital arc by relying upon a combination of the earth stations' highly directive antenna patterns and the Spectrum Sharing System ground station antenna pattern, and to avoid interfering with satellites in their orbital arc by assuring that power levels radiated in that direction by the Spectrum Sharing System ground stations are below the level that would create interference.

IPC 8 full level  
**H04B 7/185** (2006.01)

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